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**(54) TREATING AGENT AND TREATING METHOD FOR
IMPROVING DIMENSIONAL STABILITY OF WOOD**

(57) Abstract:

PURPOSE: To provide low cost and safe treating agent and treating method, with which the dimensional stability of wood is settled and the wood can be effectively modified without impairing the characteristics of the wood.

CONSTITUTION: The treating agent includes at least one monomer selected from the group consisting of polyethylene glycol monoacrylate and polyethylene glycol monomethacrylate, at least one crosslinker selected from

the group consisting of polyethylene glycol diacrylate, polyethylene glycol dimethacrylate and methylene bisacryl amide and polymerization catalyst and can be used in the form of water solution. By adhering the treating agent to wood through polymeric fixation, the dimensional stability can be improved in low degree of impregnation and with very good durability. In addition, the wood treated by the above-mentioned method can be applied with normal wood coating and the crack and separation of coating film are a few, even when the coated wood is used outdoors.

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AB - J05220712 Material is treated by (a) sticking a treating compsn.
comprising (A) polyethylene glycol monoacrylate and/or polyethylene
glycol monomethacrylate, (B) a crosslinking agent of polyethylene
glycol diacrylate, polyethylene glycol dimethacrylate and/or methylene
bis-acrylamide and (C) a polymerisation catalyst; and (b) polymerising
the compsn. to fix the polymer to the wood material.

- Pref. (A) has an average mol. wt. of up to 4000 and pref. of 350-2000.
(B) has an average mol. wt. of up to 2000 and pref. of 350-1000 and is
used in a wt. ratio of (A)/(B) of 70:30-98:2. (C) is, e.g., an
oxidising agent (e.g., Na-, K- or NH₄-persulphate), a combination of
an oxidising agent and a reducing agent (e.g., diethanolamine,
triethanolamine, hydrazine or morpholine) or an azo cpd. (e.g.,
2,2'-azobis-isobutyronitrile).

- ADVANTAGE - Improves durability and dimensional stability at a low
impregnation degree. The treating agent is used as its aq. soln. to
provide high hygienic safety. The treated wood can be painted with a
conventional wood paint to provide low cracking and low peeling of
coated paint film and long durability. (Dwg.0/0)

IW - TREAT METHOD ENHANCE DIMENSION STABILISED WOOD MATERIAL COMPRISE STICK
COMPOSITION COMPRISE POLYETHYLENE POLYGLYCOL MONO METHO ACRYLATE
CROSSLINK AGENT POLYMERISE CATALYST

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**TI - Treating method for enhancing dimensional stability of wood material -
comprises sticking with compsn. comprising polyethylene glycol]
mono(meth)acrylate, crosslinking agent, and polymerisation catalyst**